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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RAO, ANAND SHASHIKANT

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/775,179

Applicant(s)

HAMAMATSU ET AL.

Examiner

Andy S. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13,25 and 39-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13,25 and 39-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## **DETAILED ACTION**

### ***Response to Arguments***

1. As per the Applicants' instructions filed in Paper 8 on 2/13/04, claims 14-24, 26-38, have been canceled, and claims 39-54 have been added.
2. Applicants' arguments filed with respect to claims 1-13, 25, 39-54 as filed in Paper 8 on 2/13/04 have been fully considered but they are not persuasive.
3. The Applicants present two arguments contending the Examiner's rejection of claims 1-38 under 35 U.S.C. 102(e) as being anticipated by Cheung et al., (hereinafter referred to as "Cheung"), as was set forth in the previous Office Action of Paper 7 mailed on 11/10/03, and further presents these arguments in support of amended claims 1-13, 25, 39-54. However, after careful consideration of the arguments presented, the Examiner must respectfully disagree for the reasons that follow, and further apply the reference as the basis of rejection against the amended claims.

Firstly, the Applicants argue that Cheung fails to read on "detecting the noise exhibiting area based on a predetermined threshold..." because it operates on pixel differences (Paper 8: page 9, lines 1-17). The Examiner respectfully disagrees. It is noted that the pixel difference is an operand which is compared against a filter vector which is an offset for the noise measurement phase (Cheung: column 5, lines 55-67). This filter vector offset reads on the predetermined threshold as in the claims, since it is used in generating a noise indicator for applying the right filter characteristics. Accordingly, the Examiner maintains that the limitation is met.

Secondly, the Applicants argue that the "area" limitation of claims is different from Cheung which discloses "a pixel by pixel detection" as in the claims (Paper 8: page 9, lines 18-

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22). The Examiner respectfully disagrees. It is noted that since the area is defined as "in an area having at least one pixel in said image data" (See claim 1, lines 4-5), the pixel-area correlation of Cheung still applies. It is noted that that claims fail to recite the feature as argued. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., area greater than one pixel) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

A detailed Office Action follows below.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an

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international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-13, 25, and 39-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheung et al., (hereinafter referred to as "Cheung").

Cheung discloses an image processing apparatus (Cheung: column 3, lines 58-67; column 4, lines 1-5) for detecting a noise exhibiting area in an image data generated by decoding encoded data encoded by a frequency transform method and a lossy compression method (Cheung: column 4, lines 35-45), the image processing apparatus comprising: motion detection means for detecting at least one motion in the area having at least one pixel in said image data (Cheung: column 5, lines 50-67); deviation means for detecting the deviation of the at least one motion area having at least one pixel (Cheung: column 4, lines 25-35; column 6, lines 25-35); and noise detection for detecting the noise exhibiting area based on a predetermined threshold (Cheung: column 5, lines 60-67) and the detected deviation (Cheung: column 7, lines 8-62), as in claim 1.

Regarding claim 2, Cheung discloses that the deviation detecting means detects the deviation in accordance with the norm of image motion (Cheung: column 9, lines 5-30), as in the claim.

Regarding claim 3, Cheung discloses that the deviation detecting means detects the deviation in accordance with the deviation of direction of image motion (Cheung: column 6, lines 30-67), as in the claim.

Regarding claim 4, Cheung discloses detecting a motion vector as motion (Cheung: column 6, lines 1-5), as in the claim.

Regarding claims 5-6, Cheung discloses converting the motion vector to a one-dimensional value (Cheung: column 6, lines 1-12), as in the claims.

Regarding claim 7, Cheung discloses noise reduction means for reducing the amount of noise detected by said noise reduction means (Cheung: column 5, lines 30-40), as in the claims.

Regarding claim 8, Cheung discloses that the deviation detecting means further detects the deviation in accordance with the deviation of the norm of image motion (Cheung: column 9, lines 5-30), as in the claim.

Regarding claim 9, Cheung discloses that the deviation detecting means detects the deviation in accordance with the deviation of image motion (Cheung: column 6, lines 30-67), as in the claim.

Regarding claim 10, Cheung discloses detecting a motion vector as motion (Cheung: column 6, lines 1-5), as in the claim.

Regarding claim 11-12, Cheung discloses converting the motion vector to a one-dimensional value (Cheung: column 6, lines 1-12), as in the claims.

Cheung discloses an image processing method (Cheung: column 3, lines 58-67; column 4, lines 1-5; figure 2) for detecting a noise exhibiting area in an image data generated by decoding encoded data encoded by a frequency transform method and a lossy compression method (Cheung: column 4, lines 35-45), the image processing method comprising the steps of: detecting at least one motion in the area having at least one pixel in said image data (Cheung: column 5, lines 50-67); detecting the deviation of the at least one motion area having at least one

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pixel (Cheung: column 4, lines 25-35; column 6, lines 25-35); detecting the noise exhibiting area based on a predetermined threshold (Cheung: column 5, lines 60-67) and the detected deviation (Cheung: column 7, lines 8-62), as in claim 13.

Cheung discloses a storage medium for storing a computer controllable program (Cheung: column 3, lines 58-67) for detecting a noise exhibiting area in an image data generated by decoding encoded data encoded by a frequency transform method and a lossy compression method (Cheung: column 4, lines 35-45), the image processing method comprising the steps of: detecting at least one motion in the area having at least one pixel in said image data (Cheung: column 5, lines 50-67); detecting the deviation of the at least one motion area having at least one pixel (Cheung: column 4, lines 25-35; column 6, lines 25-35); detecting the noise exhibiting area based on a predetermined threshold (Cheung: column 5, lines 60-67) and the detected deviation (Cheung: column 7, lines 8-62), as in claim 25.

Regarding claims 39, 42, 46, and 49, Cheung discloses that the noise exhibiting area is a block having a plurality of pixels (Cheung: column 10, lines 20-30), as in the claims.

Regarding claims 40, 43, 47, and 50, Cheung discloses that the noise exhibiting area is unit of blocks, each of which has a plurality of pixels (Cheung: column 6, lines 9-20), as in the claims.

Regarding claims 41 and 48, Cheung discloses that the noise exhibiting area is a pixel in the area (Cheung: column 5, lines 60-67), as in the claims.

Regarding claims 44-45 and 51-54, Cheung discloses that the noise detection means detects that the respective pixel is exhibiting noise when the detected deviation is greater than or equal to said predetermined threshold (Cheung: column 9, lines 30-55), as in the claims.

*Conclusion*

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (703)-305-4813. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S. Kelley can be reached on (703)-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andy S. Rao  
Primary Examiner  
Art Unit 2613

ANDY RAO  
PRIMARY EXAMINER

asr

May 3, 2004